

Supervisor of Salvage and Diving (SUPSALV)

Navy/SUPSALV Response Capability

An Overview

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Assistant for Salvage
Supervisor of Salvage and Diving
www.supsalv.org



Brief Overview



- **Authority**
- **Navy Salvage TRIAD and Salvage Task Organization**
- **SUPSALV's Responsibility/Capabilities (00C2)**
 - **Salvage**
 - **Pollution**
- **Recent Operations and Exercises**
- **Support Agreements and Response**



Navy Salvage: SECNAV & CNO Assigned Missions



- ↙ **Authority: 10 U.S.C. §7361-7364 (Salvage Facilities Act) authorizes the Secretary of the Navy to provide necessary salvage facilities; and to provide Oil Spill Response Capability.**
- ↙ **33 CFR Part 155 (OPA-90) requires Salvage and Marine Firefighting; and Oil Pollution Response capability in VRPs (MSC and Navy exercise Voluntary Compliance)**
- ↙ **SECNAVINST 4740.1B delegates Secretarial authority of SFA to SUPSALV - *"...the Supervisor of Salvage ... is delegated all Secretarial authority in [10 U.S.C. 7361-7364] to provide salvage facilities for public and private vessels, and to acquire and transfer vessels and other salvage equipment."***
- ↙ **OPNAV 5090.1C is Navy's Environmental Requirement and Policy and directs Vessels comply with the planning requirements of OPA-90 (33CFR155) despite a legal exemption as a "public vessel".**
- ↙ **OPNAV 4740.2G is Navy's Salvage Requirements and Policy**

SUPSALV Assigned Missions



➤ OPNAV 4740.2G - Navy's Salvage Requirement and Policy and directs SUPSALV:

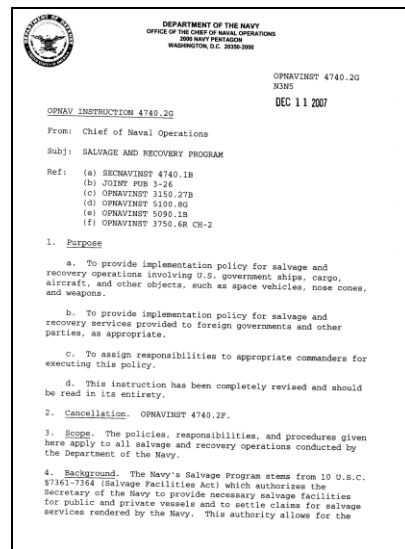
Undersea Ops: Maintain and operate deep ocean search and recovery assets to a maximum depth of at least 20,000 feet of water.

Salvage Ops: Assume responsibility for any salvage or recovery operation when so assigned..." and

Coordinate salvage and recovery services...

Salvage Support: Provide Fleet Commanders with equipment and systems to assist in the accomplishment of salvage and recovery missions and

Provide for procurement, maintenance, and distribution of salvage and related pollution abatement material to the Emergency Ship Salvage Material (ESSM) bases.



➤ OPNAVINST 5090.1C - Navy's Environmental Requirement and Policy and directs that SUPSALV:

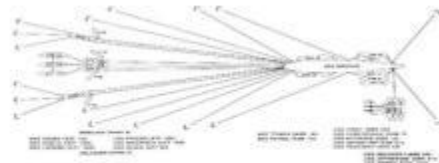
Ensure Navy's Equipment inventory for major and offshore spill events is drilled/exercised in accordance with this document.

Provide expertise and equipment ...for spills exceeding local capability...

Provide advice, personnel, and equipment, as appropriate for joint/pollution operations.

Assist NOSC's in major OHS pollution response issues as they arise and in decision-making for major or offshore/salvage related response operations.

Then and Now



This polling arrangement finally freed *Minnesota*.



Tugs chase the water, vainly trying to pull the grounded battleship *Minnesota* on 27 January 1950.



Navy Capability Salvage: Migration



Then circa 1993

Core FLEET Capability

Now

Salvage Squadrons (2)

- MDSUs 1&2
- ARSs (10)
- ATSS (3)
- T-ATFs (7)

Salvage Task Organized
w/ Consolidated
Operational and
Administrative Control

**SUPSALV
(NAVSEA)**

Salvage Force Programming
Operational Planning, Engineering
& Organization

Independent Ship Salvage

Mobile Heavy and Light Salvage

Tow Planning & Oversight

Salvage Equipment

Deep Ocean S & R

Technical Authority

MDSU ONE & TWO

**T- ARSs (4)
T-ATFs (4)**

**SUPSALV
(NAVSEA)**

- Functional and Administrative Control is Segregated
 - Task Organization complicated
- THEREFORE**



- Operational Interdependence Required
- SUPSALV now the center for full range Salvage and Towing expertise
- ESSM now a critical enabler for MDSU and Salvage Ship operational capability and training

NECC

Mobile Diving and Salvage Units
Expeditionary D&S
T-ARS/T-ATF/VOO



**NAVY
SALVAGE
CAPABILITY**

People
Sailors/Civil
Service/Contractors

**Equipment &
Platforms**

MSC

T-ARS & T-ATF
**Professional
Mariners;
Fleet Operations**



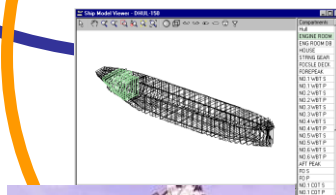
SUPSALV

**ESSM; Tech Authority;
Salvage Engineering;
Deep Ocean S & R;
Oil Pollution Response
World-wide Contracts**



ESSM

**NWP 4-12
OPNAV
4740.2G**



NAVSEA

Mobile Diving and Salvage (MDSUs) Expeditionary Salvage Capability



- Light Salvage *
- Site Survey and Assessment
- Battle Damage Assessment and Repair
- Emergent Underwater Ship's Husbandry
- Surface Supplied Diving Operations (≤ 300 FT)

15 Companies/MDSU with ~17 Personnel/Company



**** Medium and Heavy Salvage when augmented with T-ATF/ T-ARS and/or equipment from ESSM***

Military Sealift Command Ship Towing and Salvage



T-ATF (x4)

- Towing
- Fire Fighting Assistance
- Salvage & Diving*
- Deep Ocean S&R VOO
- Oil Spill Recovery VOO

* When augmented with material, equipment, and/or personnel



T-ARS (x4)

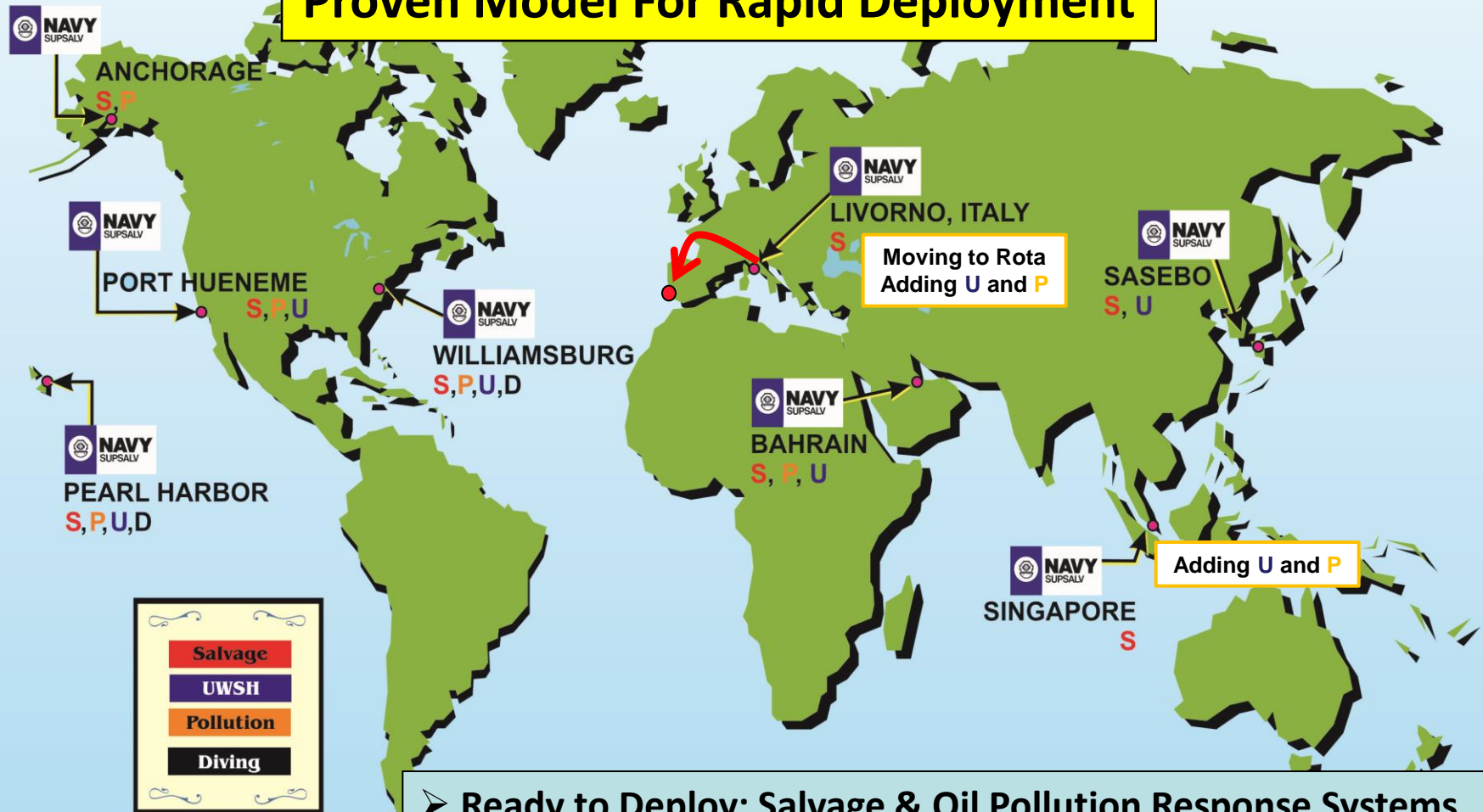
- Salvage & Diving*
- Lifting*
- Emergency Repair*
- Fire Fighting Assistance
- Towing
- Deep Ocean S&R VOO
- Oil Spill Recovery VOO

SUPSALV Salvage Capability

EMERGENCY SHIP SALVAGE MATERIAL (ESSM) SITES

Network of emergency response equipment pre-positioned to support SUPSALV and US Fleets

Proven Model For Rapid Deployment



- Ready to Deploy: Salvage & Oil Pollution Response Systems
- Ready to Support: Operators & Maintainers
- Fleet Salvage and Diving Force Enabler

SUPSALV Salvage Contractors

**Full Service
Open & Competitive Award**

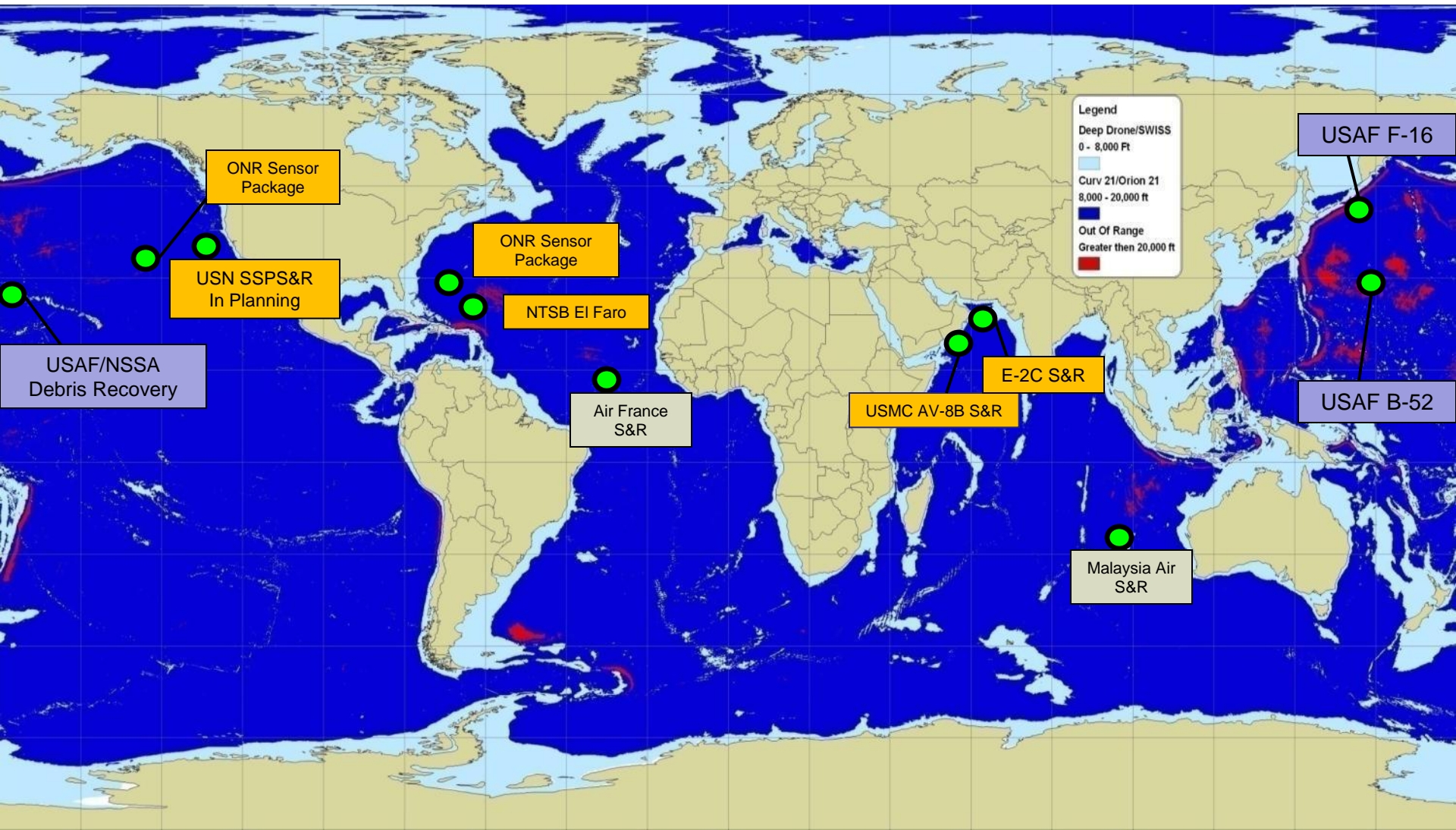


**Deep Ocean Search & Recovery Contract –
Phoenix International**

Deep Ocean S&R Capability



- 1,000, 8,000, 20,000 FSW
- 20K FSW Search and Recovery



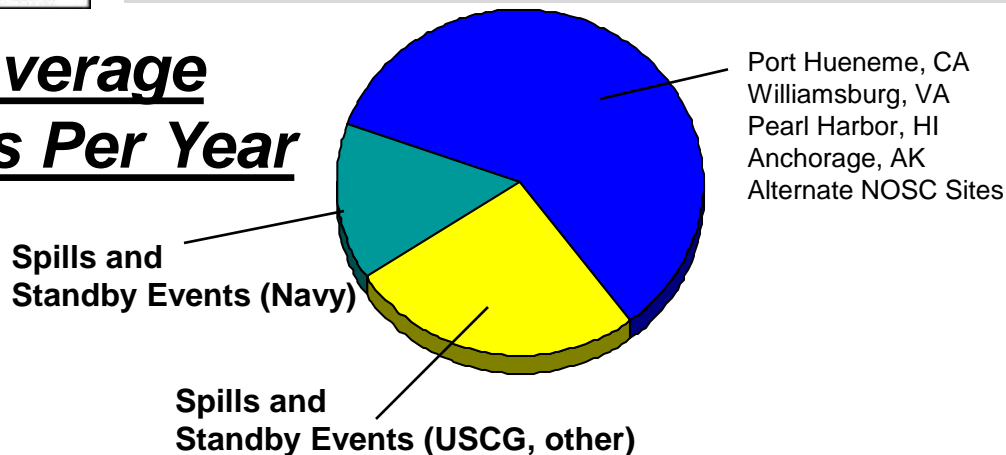
Pollution Response



Oil Spill and HAZMAT Operations



9 Average Events Per Year



- Operated by SUPSALV ESSM Contractors
- DoD OSRO for WCD (Usually Tiers 2 and 3)
- Can be cited in Federal FRP's and VRP's
- Transportable, quick set-up
- Sustainability in austere environments
- Systems designed to support Salvage (lightering and clean up)



**Spill Response is an Essential Salvage Enabler
... and vice-versa**

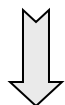
SUPSALV Equipment Overview



- Skimmer Systems (Class V & NOFI Current Buster)
- Not intended as first response
- Additional resources may be needed – scenario dependent



Navy Salvage Response



Tasking and Authority

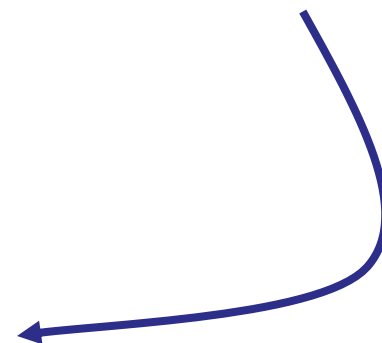
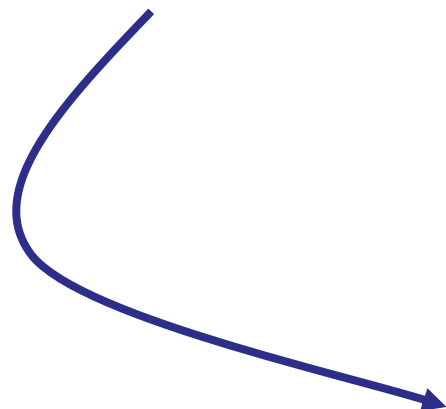


Direct to SUPSALV:

- USN fleet support
- USCG/USACE via ISA

Via CNO N31 (DSCA):

- DOD/NORTHCOM
- Federal agencies
(NRF / Stafford Act)
(NTSB, NASA)
- Foreign governments



FEMA Reform Act; 6 Oct 2006 Enables Federal response to disasters ...

Criteria: save lives, prevent human suffering, mitigate severe damage, etc.



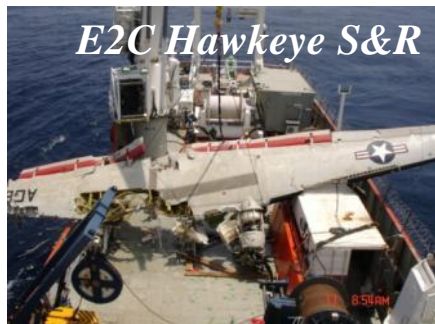
National Asset and World Leader

NAVSEA 00C



Underwater Ship Repair

- Procedures/Tech Development
- Ship Design
- ~100 Ops Per Year
- Up to 20:1 ROI



E2C Hawkeye S&R

Deep Ocean Salvage, Search & Recovery

300 – 20,000FSW

~15 Operations Per Year



USS NEW ORLEANS (LPD 18)
Hull Voyage Repair

Ship Salvage, Towing, and Heavy Lift

- ~20 Ops Per Year
- Includes National Emergency Response (Katrina, Sandy)
- Assist to USCG

Oil Spill Response

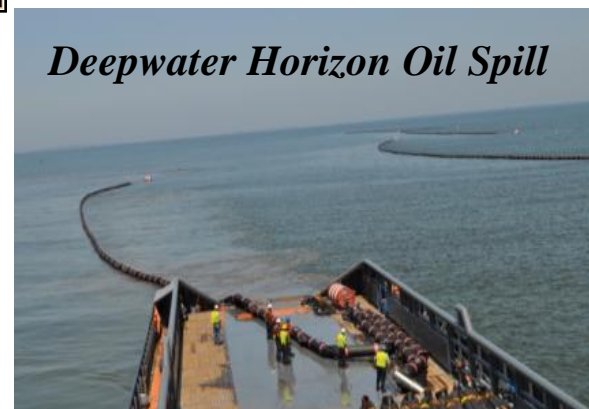
- Large Inventory Sized to Act as Tier II/III OSRO for Navy Ships/Facilities
- Emphasis on Transportability in Austere Environments

Diving/Certification)

- USN Lead Service for Diving
- DIVMAN & Decompression Tables used worldwide
- Navy Experimental Diving Unit
- Equipment Development & Procurement
- Certification Authority for DoD



MCM Heavy-Lift to C5F

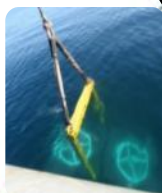


Deepwater Horizon Oil Spill

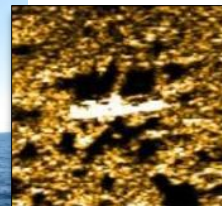
SUPSALV Recent Response Operations



San Francisco
Dry-Dock
Remediation



USS TAYLOR
Grounding
(Samsun, Turkey)



Hurricane Sandy

ALFS S&R
(VA Capes)

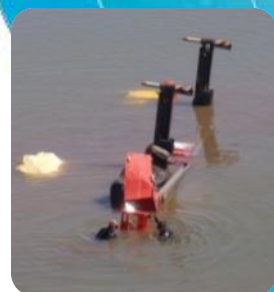
NUWC Target Support
& Torpedo Recovery
(Norfolk, VA)

CSS GEORGIA, Savannah, GA

Fort Pierce, FL

T-34 S&R
(Corpus Christi, TX)

USACE Kaw Dam
Crane Recovery
(Kaw Lake, Oklahoma)



USMC AV-8B S&R
(Gulf of Aden)

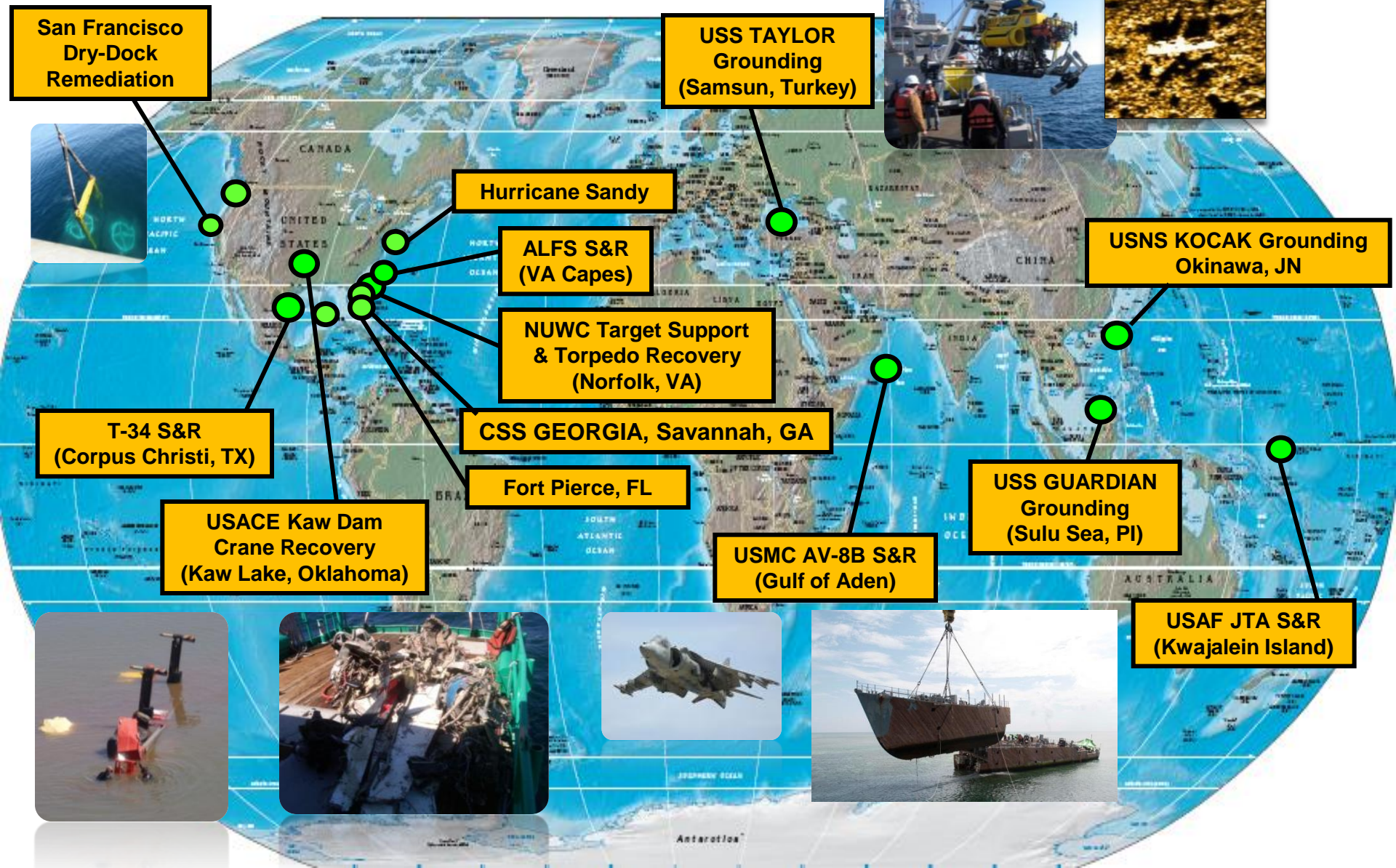


USS GUARDIAN
Grounding
(Sulu Sea, PI)



USAF JTA S&R
(Kwajalein Island)

USNS KOCOK Grounding
Okinawa, JN



SUPSALV Recent Exercises



Navy,
NORTHCOM,
USCG Arctic
Sentry OSR
Exercise
(Chukchi Sea,
AK)



Navy, Air Force, USCG
Arctic Ice OSR
Exercise
(Elmendorf AFB, AK)



USCG LA/AB
Area Exercise
Support
(Ventura Cnty, CA)



MSC Ship Exercise
Virginia

CNRSW Salv/OSR
Exercise

MEXUS Gulf OSR
Exercise

Bahrain Oil Spill
Response TTX



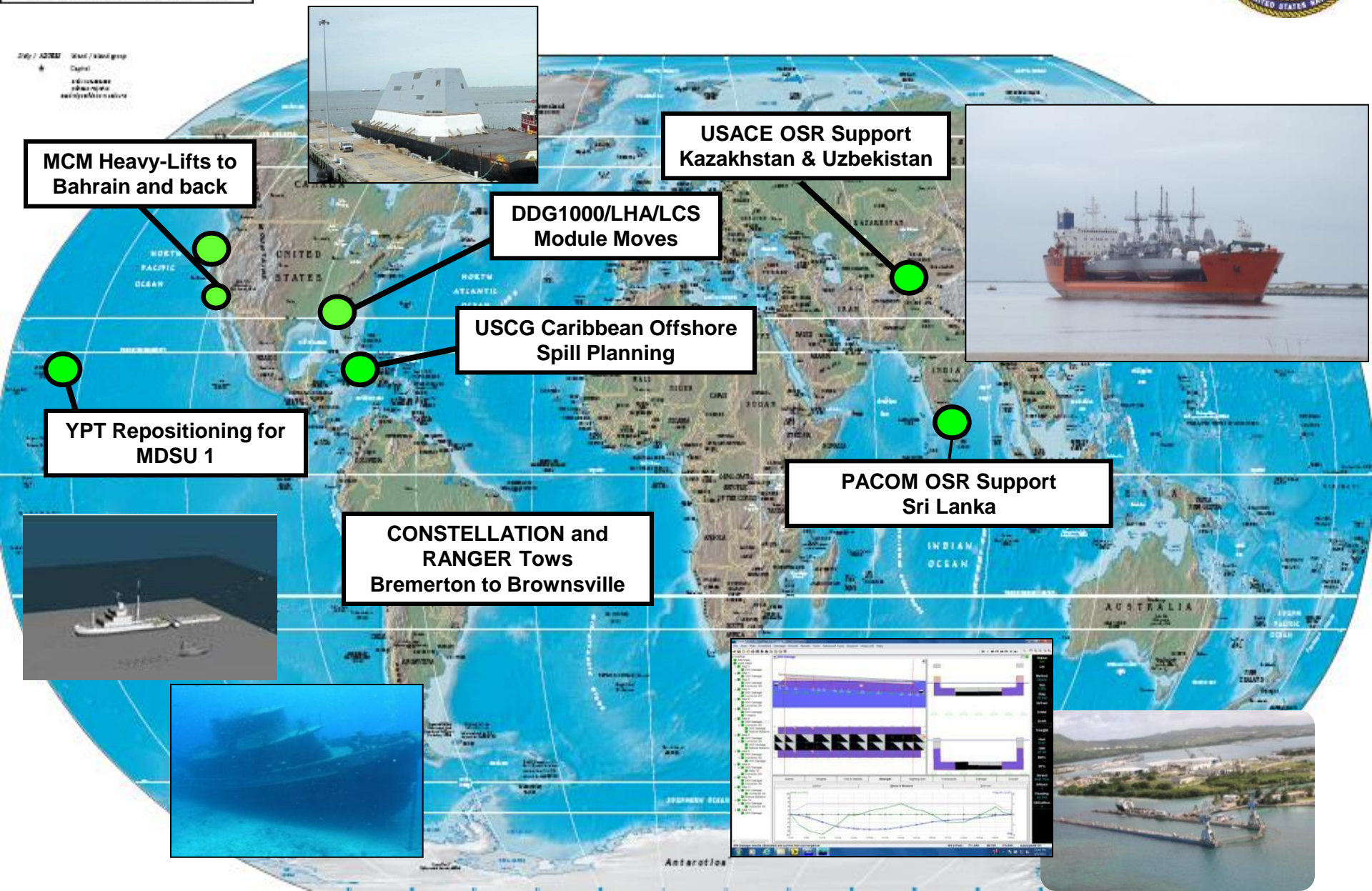
MSC Ship Exercise
Hawaii



Planning Support for
COMNAVREG Hawaii



SUPSALV Recent Technical Support



**USACE OSR Support
Kazakhstan & Uzbekistan**

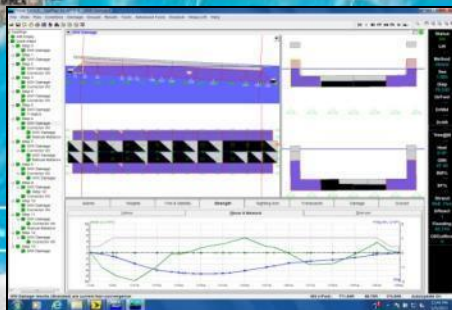


**DDG1000/LHA/LCS
Module Moves**

**USCG Caribbean Offshore
Spill Planning**

**PACOM OSR Support
Sri Lanka**

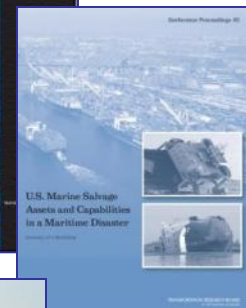
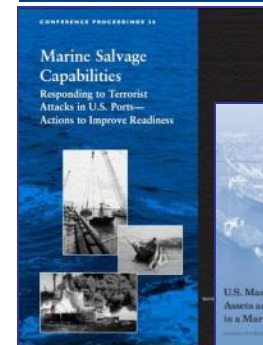
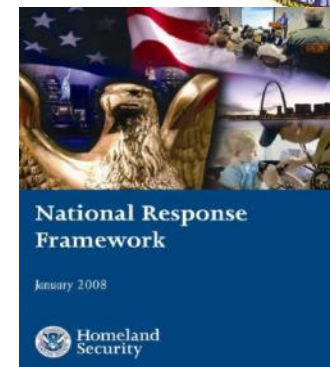
**CONSTELLATION and
RANGER Tows
Bremerton to Brownsville**



National Maritime Salvage Response Background and OPS

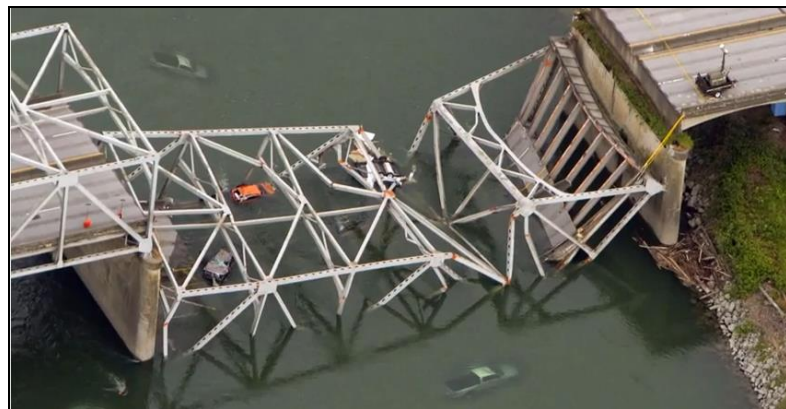


- **SUPSALV DOD REP to the NRT**
 - National Response Team → National Response Framework (NRF)
- **2003: Marine Salvage Workshop held by Transportation Research Board (Marine Board)**
- **2005: Hurricane Katrina/Rita: marine response organizational challenges**
- **2007: I-35 Bridge Collapse**
- **2008: U.S. Marine Salvage Assets and Capabilities in a Maritime Disaster Workshop**
 - ✓ *Conclusion: US can handle IF ... Combined US Navy and Industry Salvage Capability required*
- <http://onlinepubs.trb.org/onlinepubs/conf/CP45.pdf>
- **2010: Haiti Earthquake;
DWH SONS Response**
- **2011: Tomadachi, JN Response**
- **2013: Hurricane Sandy**

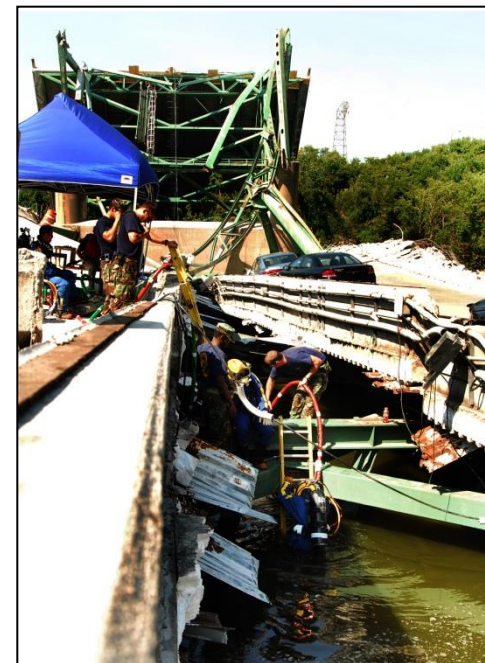


Waterway Obstruction

I-24



I-35



- Interagency Collaboration
- Pre-MOA
- SUPSALV & MDSU Support



USCG and USACE Support Agreements



	USCG w/ Navy	USACE w/ SUPSALV
Date	SEP '80 (under Revision)	JAN '11
Authorities	NCP; 33 USC 1251(Pollution Control Act); NRF ESF #10 Salvage Facilities Act – 10 USC 1761	Rivers and Harbors Act 1899 defined by 33CFR part 329; NRF ESF #3; Salvage Facilities Act – 10 USC 1761
Support/ Assistance	Oil Spill and Salvage OSR & Salvage specialized equipment and expertise Consultation, evaluation, planning and operation Naval craft, vessels and aircraft Reciprocal	Salvage Initial response assessment and management Salvage specialized equipment and expertise for: Salvage, towing, heavy-lift, diving support
Requests/ Tasking	SUPSALV may be contacted directly by the FOSC The FOSC shall make the request via a message to SUPSALV with parallel request for support forwarded to Chief of Naval Operations CNO N311	SUPSALV may be contacted directly by a USACE District office. Parallel request for support forwarded to Chief of Naval Operations CNO N311, by USACE via message.
Funding	Pollution Removal Funding Authorization (PFRA) or Military Interdepartmental Purchase Req (MIPR) USCG shall reimburse SUPSALV its actual costs of performing the services	Military Interdepartmental Purchase Req (MIPR) USACE shall reimburse SUPSALV its actual costs of performing the services

Navy Salvage Response



When Both

Appropriate AND IBI of GOV

- RP is GOV
or
- RP Unknown
or
- National Response/SONS
or
- Tech Assist/
Operational
Management

- Unique Capability
or Capacity
or
- No RP and cost
benefit to GOV
or
- Tech Assist/
Operational
Management

When do I
consider
Navy/SUPSALV





Prev



Next

SUPSALV NEWS

- 9/28/2015 SUPSALV Validates LCS APU Removal/Installation Procedures
- 7/22/2015 SUPSALV Support for CSS Georgia Recovery Operations
- 4/23/2015 SUPSALV clears Fort Pierce Channel of Sunken Barge
- 4/10/2015 SUPSALV conducts hull cleaning on Navy's Oldest Ship

SUPSALV Validates LCS APU Removal/Installation Procedures

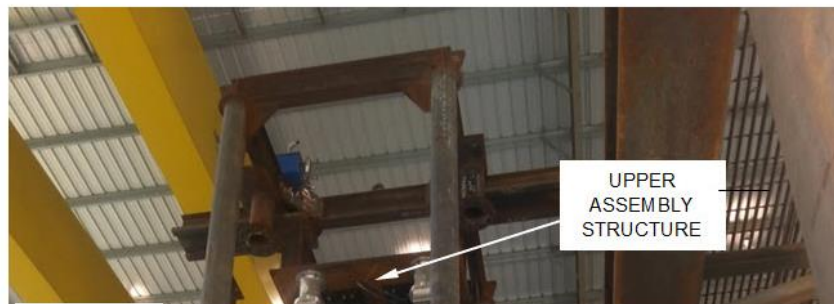
Print Friendly

24 September 2015

WASHINGTON - The Naval Sea Systems Command's Office of the Director of Ocean Engineering, Supervisor of Salvage and Diving (SUPSALV) has responded to a PEO LCS request to establish underwater maintenance and repair processes and procedures for the Retracting Azimuthing Thruster (RAT) for INDEPENDENCE variant Littoral Combat Ships. SUPSALV's Underwater Ship Husbandry Division (UWSH) that develops waterborne repair procedures for the fleet was assigned the task.

The RAT, which on other classes of ships is known as the Auxiliary Power Unit is located forward on the hulls, is hydraulically driven, and extends and retracts outside the hull where the extreme curvature complicates cofferdam placement without welding pad eyes to the structure. SUPSALV's UWSH team and its contractor, Global PCCI (GPC), working with the RAT manufacture Thrustmaster of Texas (TMOT) developed a solution that eliminated the need for an oversized cofferdam and pad eyes by designing a cofferdam to be installed directly to the RAT motor housing.

To verify and test the draft procedures, SUPSALV scheduled a week at TMOT and offered the opportunity to our fleet Navy divers to both assist in the evaluation and provide a training opportunity. Fleet Navy divers from Southwest Regional Maintenance Center and Japanese divers from Japan Regional Maintenance Center were on site and walked through the procedural steps from removal to replacement of the RAT assembly. "The opportunity to have our fleet Navy divers as well as our Japanese counterparts onsite and involved is key" said CWO3 Joe Theodorou, UWSH LCS program manager. "Validation of this procedure allows us to have a positive impact on fleet readiness, helps avoid unnecessary dry dockings, and ensures that our ships will meet their mission by getting them quickly back into service."



U.S. Navy Diving Advisories have moved!!

SUPSALV is now posting Navv-only information like the *Divina Advisories*, *Salvaae ESC*, *Divers Working Group* planning info, *Failure Analysis Reporting (FAR)*, and *Propeller*

New on 00C Pages

- 03 Nov 2015:
[Published updated A](#)
- 28 Oct 2015:
[Published technical s](#)
[SUPSALV's newest RO](#)
[HYDROS](#)
- 28 Sept 2015:
[SUPSALV Validates L](#)
[Removal/Installation](#)
[Procedures](#)

QUESTIONS?



00C2
Mike Herb
Division Head

00C21
Rick Thiel
ESSM PM
Salvage Engineer

00C22
Ric Sasse
Deep Ocean S&R
Salvage Engineer

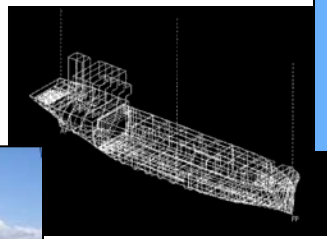
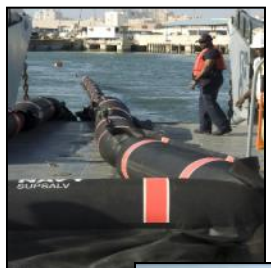
00C20A & B
LCDR Dan Neverosky
LCDR Eric Brege
Salvage Engineers
EDO's

00C23
Jim "Doc" Ruth
Towing / HL
Salvage Engineer

00C24
Vince Jarecki
Naval Arch/POSSE
Salvage Engineer

00C25
Kemp Skudin
Oil Pollution Response PM
Salvage Ops Specialist

00C25A
Stephanie Brown
Oil Pollution Response LCM
Salvage Engineer





Pollution Equipment in CONUS



- 27 Offshore Skimmer Systems (22 Marco & 9 VOSS)
- 6 Salvage Spill Support Vans (Smaller Boom & Skimmers)
- 20 Oil Storage Bladders (26k – 290k gallons)
- 88,000 ft Offshore Inflatable Containment Boom (42")
- 71 Boom Mooring Systems w/ 52 Deep Water Extensions
- 16 Boom Towboats, 24 Rigid & Inflatable Tending Boats
- 13 Tanker Offload Systems, 4 Pumping vans w/ 2"-6" pumps, 4 floating hose systems and 9 Lightering Fender Systems
- 7 Hot Tap Systems
- 4 Steam generators and 4 Oil Bladder Transfer System
- 8 Offshore Fire Fighting Systems
- 3 Modular Working Platforms & 2 Material Transfer Systems



Salvage Equipment in CONUS



- 53 Portable Air Compressors (175 and 600 CFM)
- 14 Beach Gear Systems
- 20 Portable Capstans/ Winches
- 55 Generators (5 and 30 kw)
- 24 Light Towers and 7 Light Kits
- 9 Pontoon Lift Bags (22k lbs)
- Over 150 Pumping systems (various)
- 5 Spooling Systems
- 9 Underwater Cutting Kits
- 12 DC Welders (400 Amp)
- 6 Fly Away Deep Ocean Salvage Systems (15, 30, 60 kip)
- Synthetic Line Systems (various types and sizes)
- Tow Hawser Systems and Towing alarm system



Support Equipment in CONUS



- 7 Personnel and 4 Equipment Transfer Boats
- 7 Beach Transfer Systems
- 11 Command Trailers/Vans
- 7 Rigging Vans
- 6 Shop Vans
- 10 Personnel Bunk Vans
- 5 Equipment Decontamination Vans
- 2 Supply Vans
- 15 land-based communication systems, 2 shipboard



SUPSALV Mission Capabilities Fleet Support



- **Operational Responsibilities**
 - Emergency Ship Salvage Material (ESSM Bases)
 - Deep Ocean Search and Recovery
 - Maintain Standing Marine Services Contracts
 - 3 Salvage Zones, Diving, Search/ROV Ops, ESSM/Pollution
 - Verbal Delivery Orders – Cost Plus Award Fee
 - SUPSALV Engineers & Operations Specialists
- **Technical Authority**
 - Technical Warrant Holder for Diving and Salvage
 - Develop and Procure Equipment
 - Technical Documentation (Manuals, Specifications, etc.)
 - On Scene and Remote Technical Advise & Support